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Editorial

Decisions Are Only as Good as the Information Considered

The importance of accurate information in the decision-making process cannot be overemphasized, especially when it comes to decisions affecting the lives of millions of people and future generations. Unfortunately, decisions may be based more on feelings than on an assessment of facts, and sometimes we just don't have time to wait until all the facts are in.

The importance of reliable information is illustrated in a wonderful story about a U.S. Ice Hockey Team that went to Moscow to play in a series of exhibition games with the Soviets in the early 1970s. The team was housed in a hotel in Moscow, and two of the members, based on rumors and misinformation, suspected that their room was bugged. They searched the room for microphones and eventually found, in the center of the room, a strange-looking round piece of metal embedded in the floor, underneath the rug. They thought they had found the bug. With considerable effort they dug it out of the floor only to hear a muffled crash as the chandelier fell to the floor in the room below. A decision had been made based on limited information, and the consequence was a minor disaster. While this example is humorous, there are many others, especially involving governments, where decisions based on inadequate information have led to tragedy and human suffering. In general, I think it is accurate to say that decisions are usually only as good as the information upon which they are based.

Recently, the Congress voted not to fund the Office of Technology Assessment (OTA), a branch of the federal government that provided congressional committees with analyses of scientific and technical issues. Without funding, the OTA is effectively dead, although the Technology Assessment Act, which was signed into law by President Nixon in 1972, has not been repealed. A future Congress could resurrect the OTA, but for the moment the office has been eliminated. An article addressing the achievements of the OTA appears on page 154. This editorial is not so much about the demise of the OTA as it is about who will now be supplying our Congressional leaders with scientific information and advice that was previously supplied by the OTA. These matters are especially crucial because wrong decisions today could have deleterious effects on millions of people tomorrow.

Many potential sources are available for the gleaning of scientific information. The Congress could turn to the private sector. If it does, what are the advantages and disadvantages? There are numerous consulting firms and advisory groups in Washington, DC, alone, all of whom will provide advice for a price. The price is not as important as the quality of the advice and its scientific validity. While many consulting firms may well provide good advice, their resources are small and their ability to get input from the best scientific minds is limited. Impartiality is another concern. When billions of dollars are at stake, the need for impartiality becomes overwhelming; unfortunately, large amounts of money and impartiality do not generally go together.

Other government institutions could become more active in providing the Congress with the information that it needs. Institutions like NIH, NASA, and EPA are often called upon for opinion and advice by the Congress, although budgetary restraints prevent this activity from being a major one. Institutional budgets are not designed to meet the needs of Congressional committees, although some adjustments could be made. Institutional bias must also be considered, since invariably institutional survival mechanisms become active when those that hold the purse strings are doing the asking. The Congressional Research Service (CRS) is part of the Library of Congress, and they often prepare reports for Congressional members; however, their budget is limited and their investigations are generally confined to literature surveys. The CRS has neither the budget, inclination, nor the scientific expertise to advise the Congress on scientific matters or science policy.

Clearly, there are many ways for the Congress to access scientific information, but the most appropriate is through the organization that was originally founded for this purpose. I refer, of course, to the National Academy of Sciences (NAS). In 1863, during the Lincoln administration, the NAS was established by Congress specifically for the purpose of advising Congress on scientific issues: "the Academy shall, whenever called upon by any department of the Government, investigate, examine, experiment, and report upon any subject of science or art . . ." The Academy expanded to include the National Research Council in 1916, the National Academy of Engineering in 1964, and the Institute of Medicine in 1970. The NAS, with a membership of over 4000, is a nonprofit organization of the best scientific minds this country has to offer, and new members are elected to its ranks each year. The bulk of studies are funded by the federal government, although private industry, foundations, and private endowments also contribute.

The NAS can call upon a larger body of experts than any other organization involved in scientific assessment and policy, and the information thus obtained is as unbiased as any information obtained from experts can be. A major criticism of the academy has been not the quality of its work, but the timeliness of its responses. The NAS is the appropriate body, but whether it can meet the needs of the Congress in a timely manner remains to be seen.

In the absence of the OTA and the highly complex world of technology and science, let us hope that the Congress will choose to seek sound, unbiased advice. Let us further hope that the Congress will turn to organizations like the NAS that are objective and reliable and that as new scientific challenges face our Congressional leaders, we will not hear the sounds of our scientific chandelier falling to the floor beneath their feet.

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